

Work Order ID 56501

February 25, 2010 10:57:44 AM



Page 1

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 2/25/10 Start Qty: 1.00



Cust Item ID:

Required Date: 3/05/10 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

AP

Date: 10-2-25

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H

100

0.00



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

Mori Seiki CNC Lathe Large

Turn as per Folio FA599

Rev *HA* & Dwg D3391 Rev: *4*

scribe batch # on fwd end at 90 degree

(X) AWM / MB 10-03-02

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

1 - - AWM / MB 10-3-2

111

0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

(Signature) 10-3-14 (1)

(Signature) PTO

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3391-025 PAR #: _____ Fault Category: Machining NCR: Yes No DQA: _____ Date: 100505
 Resolution: Accepted Disposition: USE AS IS. QA: N/C Closed: _____ Date: 10/05/04

NCR: <u>56501</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/03/07	120	Dimension of 3.300 was under tolerance by .005" and Hole of .484 was not center.	CP 10.03.16 per QSI 042	Acceptable, Minor effect on strength in non-critical area	S.B. 10/03/07	10-3-16	P 10.03.16 per QSI 042	10/5/07
		Rel. operator error / LOA.						

NOTE: Date & initial all entries

Work Order ID 56501

Page 2

February 25, 2010 10:57:44 AM

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Item Name: Aft Tube Assembly

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Cust Item ID:

Required Date: 3/05/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Stop



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 HAAS 1 HAAS CNC vertical machine #1	HAAS CNC VERTICAL MACHINING #1 Memo 1-Machine as per Folio FA 599 Rev: <u>AA</u> & Dwg D3391 Rev: <u>H</u> 2-Debur	0.00 0.00				<u>1</u>			
130 QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00				<u>1</u>			<u>1</u>
140 QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Page 3

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Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

160

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Form as per Dwg D3391 Using Bend Prog 3391025

170

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

h2 4.3125

8/10/17

10-3-17

ⓧ

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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February 25, 2010 10:57:44 AM



Page 4

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Cust Item ID:

Required Date: 3/05/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start



QC: Date: SPC (Y/N): Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

180

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217
Wearplate Jig .

*****Do Not Open To Finished Size*****

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2
previously drilled aft wearplate holes.

5-Open wearplate holes to 0.250" and c'bore as per dwg D3391

6-Open up all wearshoe , wearplate to 0.297"and float bag holes to 0.328" as per
Dwg D3391.

7-Deburr

1

4/12/3/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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February 25, 2010 10:57:44 AM



Page 5

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Cust Item ID:

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8/10/17

Memo

0.00

200



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

10/07/18

Memo

0.00

210



QC

Quality Control

QC3- Inspect Part Finish

0.00

10-3-18

Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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February 25, 2010 10:57:44 AM



Page 6

Item ID:	D3391-025	Accept		Setup	Start	
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Start Date:	2/25/10	Start Qty:	1.00		Cust Item ID:	
Required Date:	3/05/10	Req'd Qty:	1.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220		0.00							
	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: <u>M112417</u> exp. date: <u>11/1/30</u> cure time 12hrs as per QSI0015			<u>4/10/3/23</u>					
230		0.00							
	QC5- Inspect part completeness to step on W/O								
QC	Memo	0.00							
Quality Control									
240		0.00							
	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum								
Powdercoat	<u>M1114207</u>	0.00							
Powder Coating	Memo START TIME: <u>7:00AM</u> OVEN TEMPERATURE: <u>320°</u> FINISH TIME: <u>7:30AM</u>			<u>=) M 10/04/28</u>		<u>X1</u>	<u>9</u>		<u>PTO</u>

Dart Aerospace Ltd

W/O: 56501		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10-04-27	230.1	PRESSURE WASH & Realign AS per PAR 09-043	ME	10/04/27	XL		S 10/04/27

Part No: D3391-025 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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February 25, 2010 10:57:44 AM



Page 7

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250 	QC3- Inspect Part Finish	0.00							
QC Quality Control	Memo	0.00				①			BR 10-4-28.
260 	HandFinishing	0.00							
HandFinish Hand Finishing	Memo 1-Install inserts as per Dwg D3391 2-Install Aft Cap as per Dwg D3391 A/ R Sikaflex-241/-291 m/12429 Sikaflex expiry date: 10/08	0.00							
270 	QC5- Inspect part completeness to step on W/O	0.00							
QC Quality Control	Memo	0.00							④

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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February 25, 2010 10:57:44 AM

Accept

1. The first step is to identify the key components of the system. This includes understanding the hardware, software, and data involved.

2. The second step is to define the requirements. This involves determining what the system needs to do and what it must be able to handle.

3. The third step is to design the system. This includes creating a detailed plan of how the system will be built and how it will be tested.

4. The fourth step is to implement the system. This involves building the system according to the design and testing it to ensure it works as intended.

5. The fifth step is to maintain the system. This involves keeping the system up-to-date and ensuring it continues to work properly over time.

Setup Start

[illegible]

Stop

[illegible]**Cust Item ID:**[illegible][illegible]

Customer:

Reference:

Run Start

Abstract

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Insp. Stamp

Identify as per dwg & Stock Location: 08198 0.00

[illegible]

Packaging

Packaging

Memo

D412-742-043

000

1 BR 104-28

QC21- Final Inspection - Work Order Release

0.00

[illegible]

QC

Quality Control

Memo

0.00

10/04/30

MF
10-4-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

February 25, 2010 10:57:49 AM

Page 1

Work Order ID: 56501

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 2/25/10

Required Date: 3/05/10

Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC
 IPP Rev:C 06-03-28 Update Manuf. Instructions JLM ☐ ☐ ☐
 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD

Start Qty: 1.00

Required Qty: 1.00

D6014-090

Manufactured No

100

Each

11.0000

1.0000



ALUMINUM EXTRUSION. ✓

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

LG

11

42768

11

D3670-4-200

Manufactured No

230

Each

83.0000

4.0000



SPACER

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

83

48198

4

48269

79

1 AWM 10-3-2

4 M10/3/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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February 25, 2010 10:57:49 AM

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Start Date: 2/25/10

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Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC
 IPP Rev:C 06-03-28 Update Manuf. Instructions JLM □□□□
 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD

Start Qty: 1.00

Required Qty: 1.00

D2646 Manufactured No 270 Each 52.0000 1.0000



Aft Cap

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP6 29

52663 29

Main Warehouse

fp7 13

52663 ✓ 13

Main Warehouse

ST 10

46327 4

48109 6

D3537-1 Manufactured No 270 Each 140.0000 1.0000



Wearpad

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP 57510 74

48288 2

55465 72

Main Warehouse

FP17 66

51678 1

51679 65

1 BR 10-4-28.

1 BR 10-4-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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February 25, 2010 10:57:49 AM

Page 3

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 IPP Rev:C 06-03-28 Update Manuf. Instructions JLM ☐ ☐ ☐
 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD

Start Qty: 1.00

Required Qty: 1.00

D3537-7 Manufactured No 270 Each 14.0000 1.0000



Wearpad

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

14

45408 ✓

3

46346

11

1 BR 10-4-28

D3553-1 Manufactured No 270 Each 9.0000 1.0000



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

9

33868 ✓

9

1 BR 10-4-28

D3553-3 Manufactured No 270 Each 58.0000 1.0000



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP

58

53480 ✓

58

1 BR 10-4-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Page 4

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 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD

Start Qty: 1.00

Required Qty: 1.00

D3672-1 Manufactured No 270 Each 1,682.000 2.0000



Phenolic Washer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	1182
39275	19
42329	5
47628 ✓	158
52505	1000

Main Warehouse

ST117	500
51674	500

ALS4-1032-130 Purchased No 260 Each 1,678.000 14.0000



Insert

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 114407	1678
110511	1678

2 BR 10-4-28

14. BR 10-4-28.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

270

Each

6,230.000 12.0000



Insert

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

6230

107441

16

110768 ✓

6214

AN3C4A

Purchased

No

270

Each

1,033.000 6.0000



BOLT

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

1033

112314

13

112720

12

112724

3

112829

1

112991

2

113121

64

113226

344

113644

394

113749

200

12 Bl 10-4-08.

6 Bl 10-4-08.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 6

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 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD

Start Qty: 1.00

Required Qty: 1.00

AN3C5A Purchased No 270 Each 465.0000 4.0000



Bolt

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	114056	465
111424		8
111707		69
112314		1
113121		125
113149		262

H. BK 10-4-28.

AN960C10L Purchased No 270 Each 388.0000 10.0000



washer

Warehouse Loc Qty Loc Code

Location

OFFSHORE

FG	114341	100
103585		100

Main Warehouse

ST		288
112116		128
112612		160

10 BK 10-4-28.

NAS 1149C0332R.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 56501
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: H	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.00	✓			
3.500	+/-0.010	3.532	✓			
88.93	+/-0.030	88.93	✓			
44.995	+/-0.030	44.995	✓			
Ø3.200	+/-0.010	3.199	✓			
88.93	+/-0.030	88.93	✓			
Ø3.750	+/-0.010	3.75	✓			
30° x 160° chamfer	+/-0.010	30° x 160°	✓			

Measured by: MD / AWM	Date: 10-03-02
Audited by:	Date:

HAAS Section						
1.526	+0.000/-0.030	1.525	✓			
7.500	+/-0.010	7.496	✓			
27.750	+/-0.010	27.750	✓			
31.750	+/-0.010	31.750	✓			
35.250	+/-0.010	35.250	✓			
3.300	+/-0.010	3.285		✓		
0.200	+/-0.010					
3.520	+/-0.010	3.517	✓			
0.687	+0.010/-0.000	.692	✓			
R0.062	+/-0.010	.062	✓			
Ø0.484	+0.005/-0.001	.439	✓			

Measured by: RB	Date:
Audited by: 10/03/07	Date: 10.3.16

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	

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ENGINEERING

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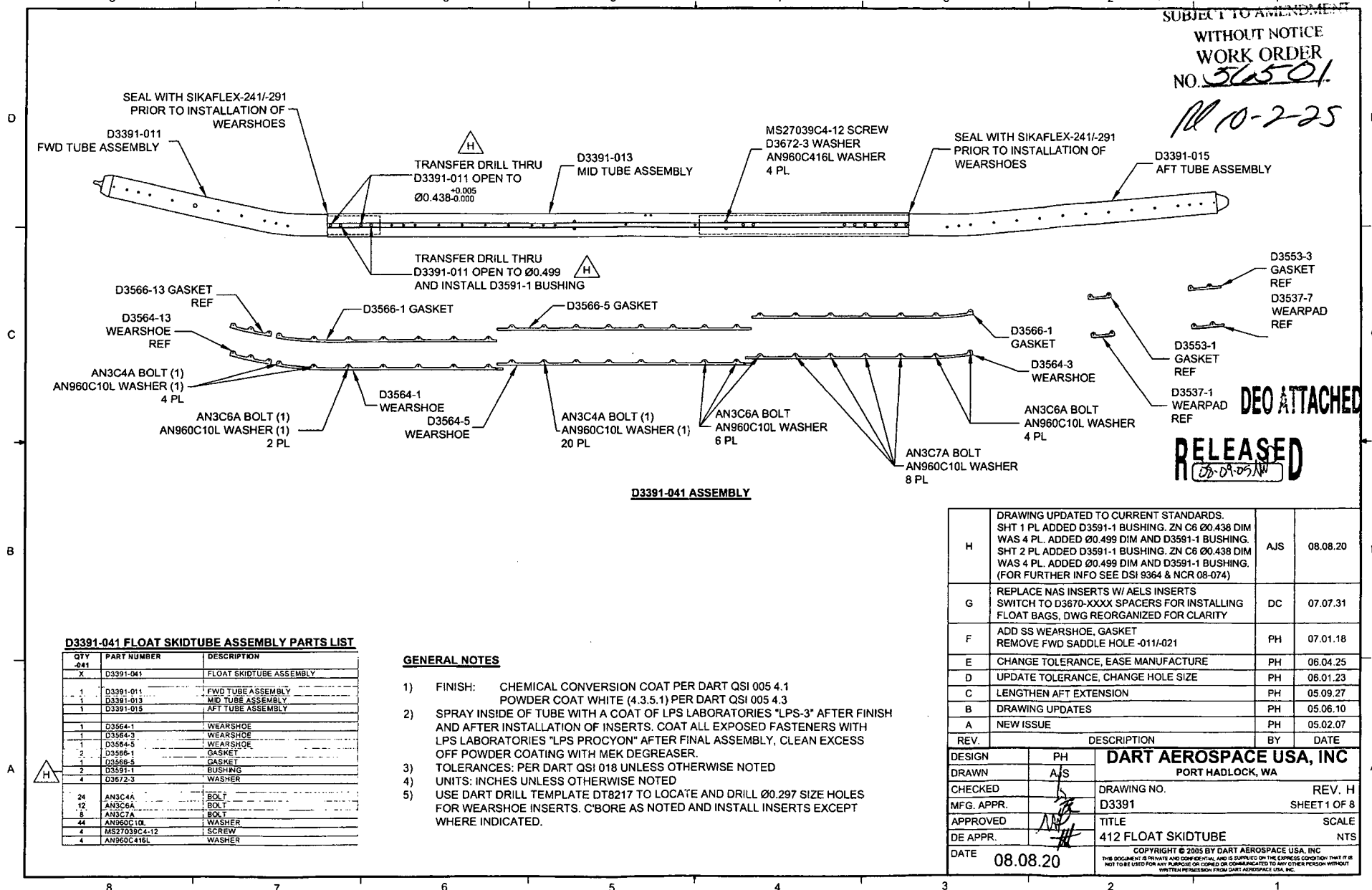
SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER

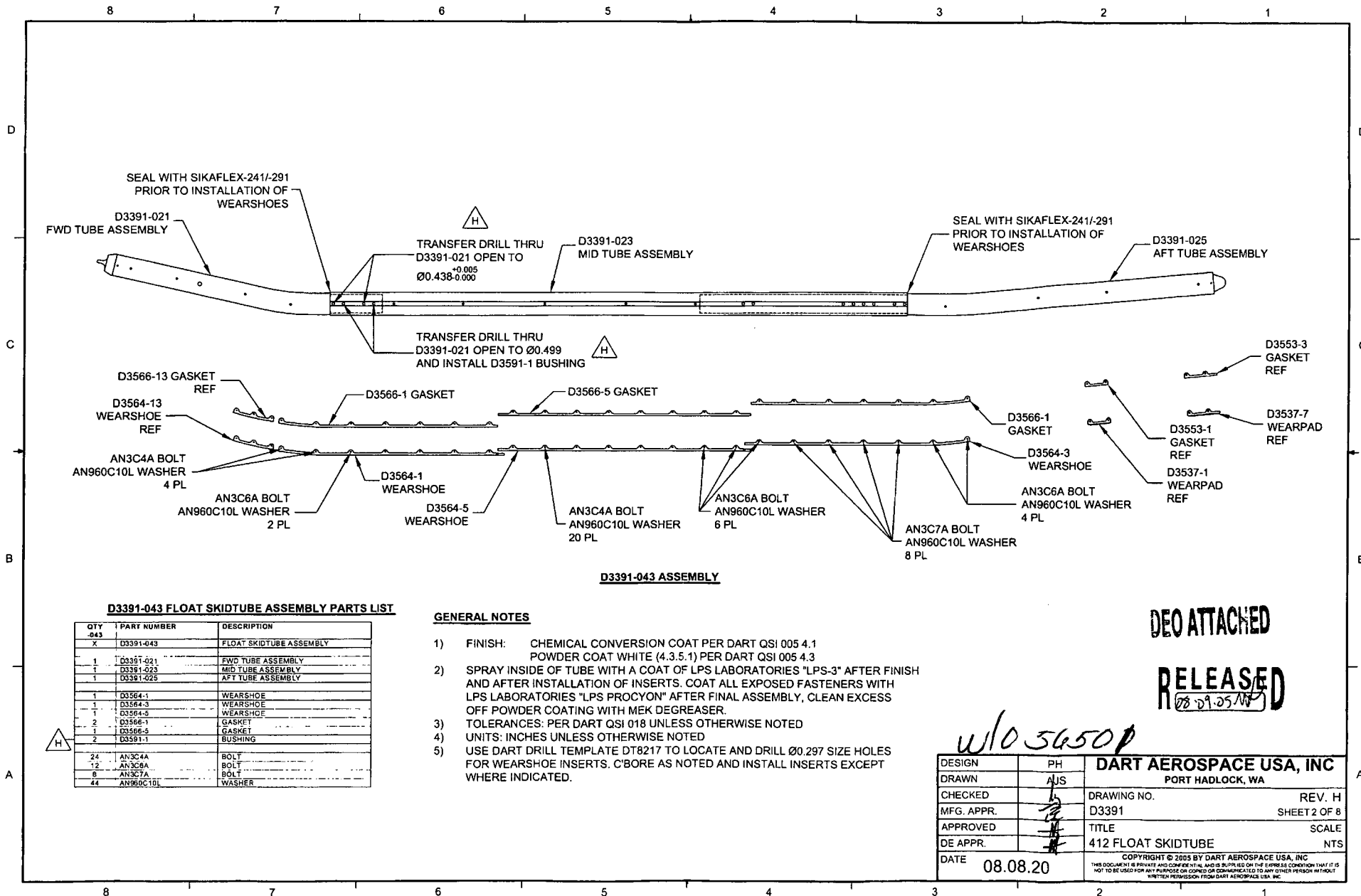
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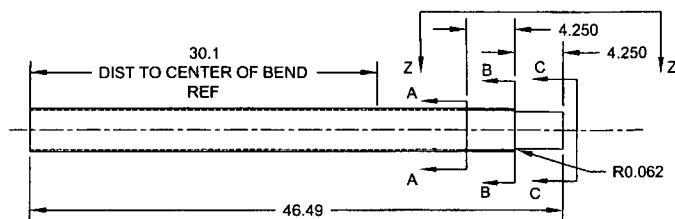
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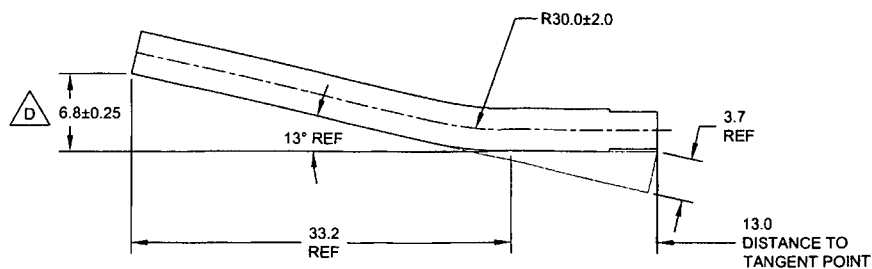
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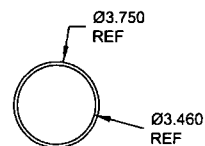




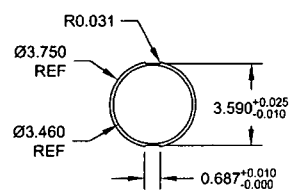
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



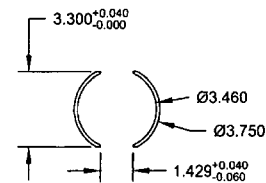
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



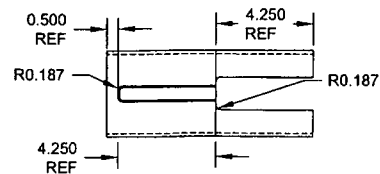
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SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X

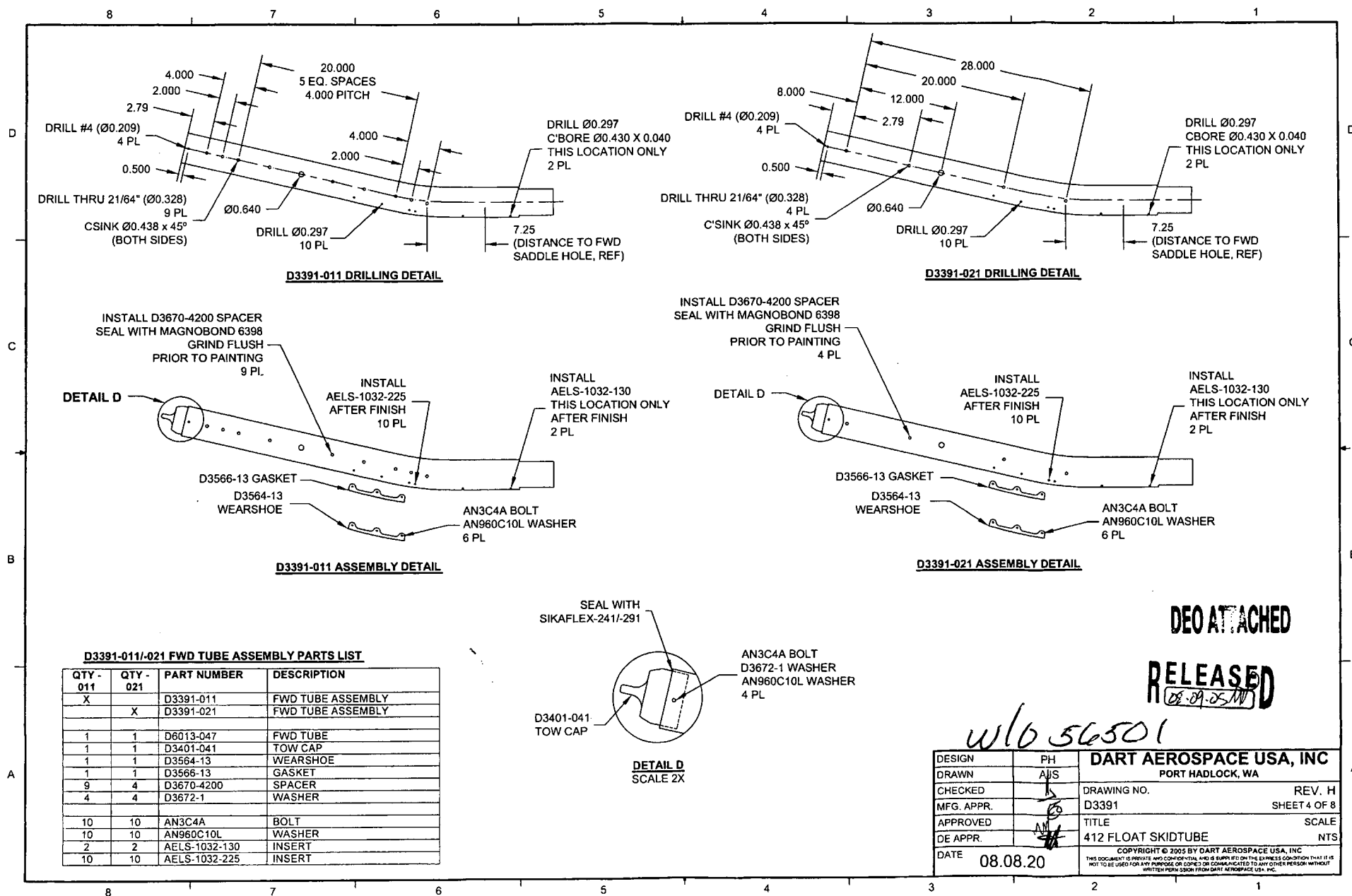


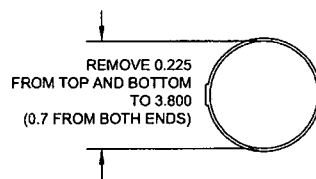
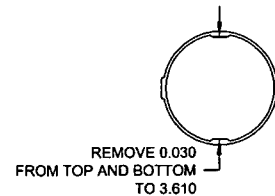
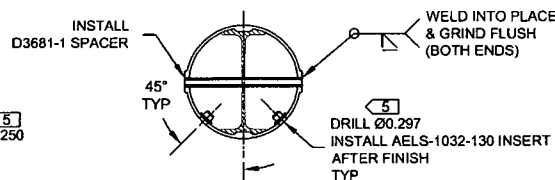
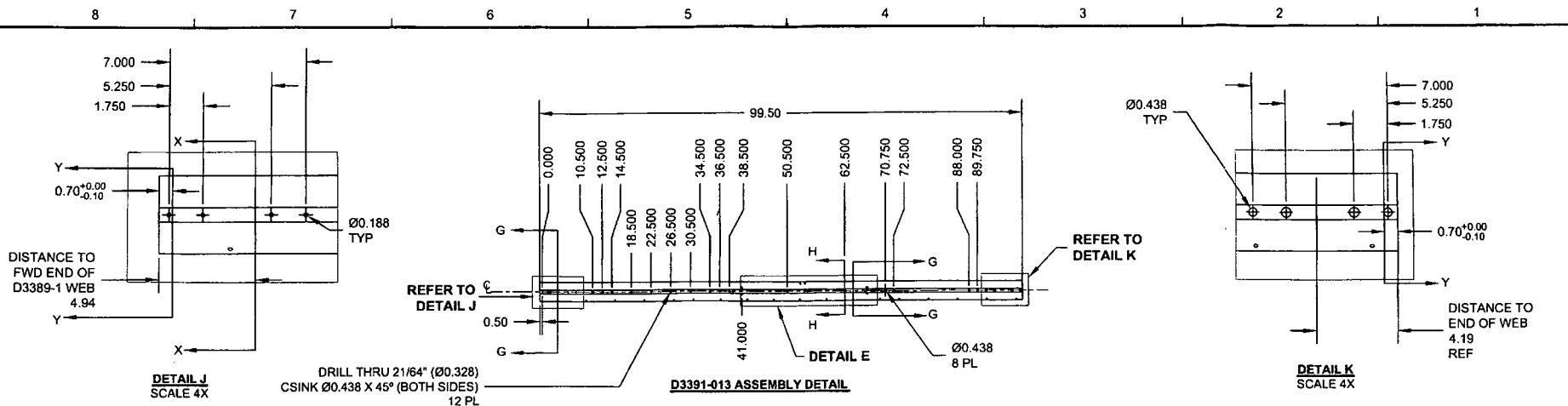
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RELEASED
28-05-11

W/D 36301

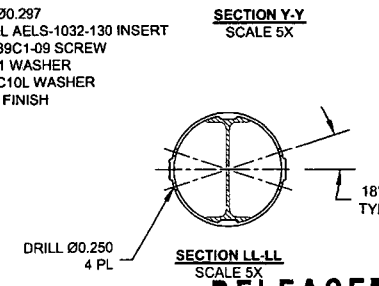
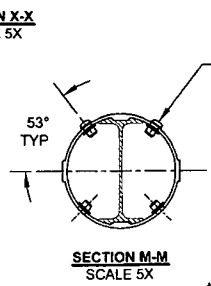
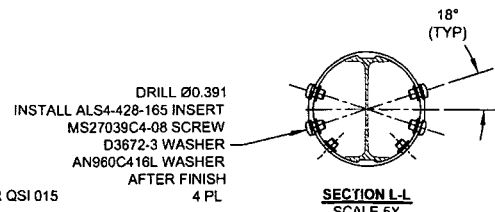
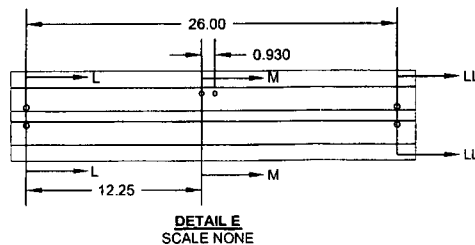
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D3391	REV. H SHEET 3 OF 8
MFG. APPR.		TITLE	SCALE
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D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



- D3391-013 MID TUBE ASSEMBLY**
- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
 - 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
 - 3) WELDING: PER DART QSI 004

DART AEROSPACE USA, INC
PORT HADLOCK, WA

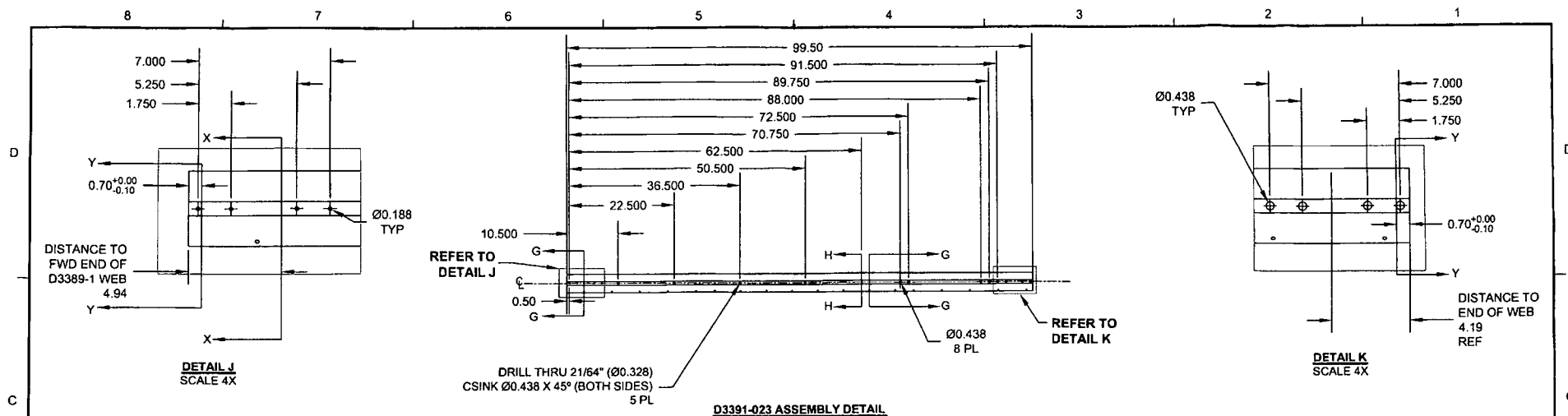
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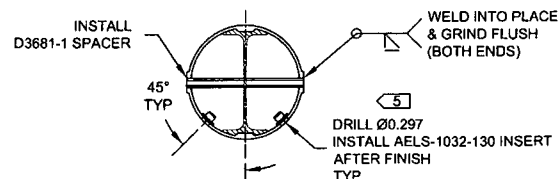
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TITLE: 412 FLOAT SKIDTUBE
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REV. H
SHEETS OF 8

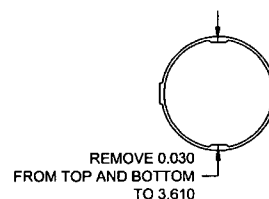
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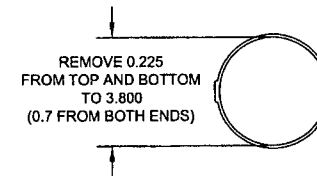
SECTION G-G
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SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

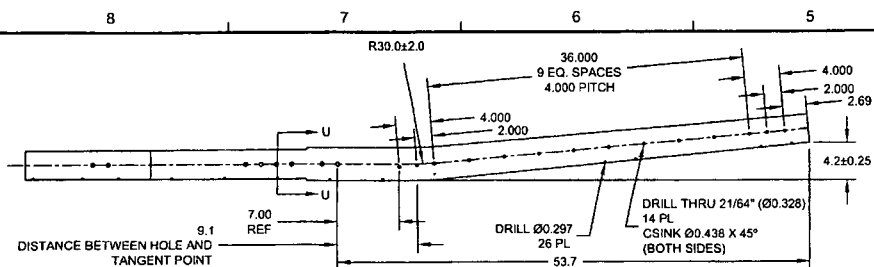
QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-2411/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

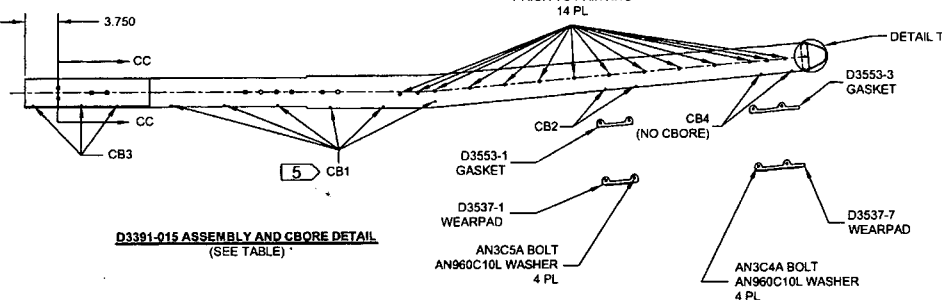
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DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
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D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

INSTALL D3670-4200 SPACER
SEAL WITH MAGNOBOND 6398
GRIND FLUSH
PRIOR TO PAINTING
14 PL



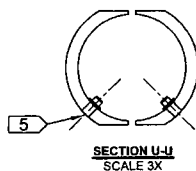
D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

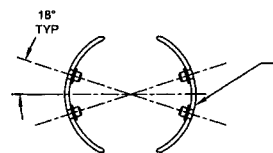
QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X		D3391-015	AFT TUBE ASSEMBLY
	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4		ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130

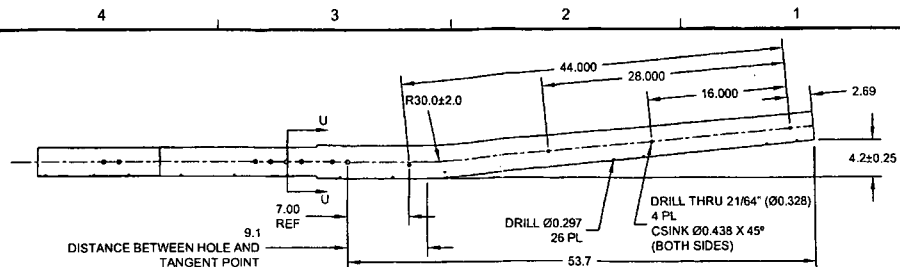


SECTION U-U
SCALE 3X



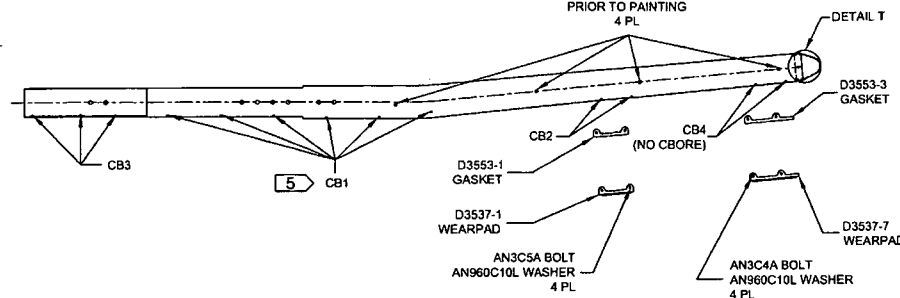
SECTION CC-CC
SCALE 3X

DRILL Ø0.391
CBORE Ø0.516 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL

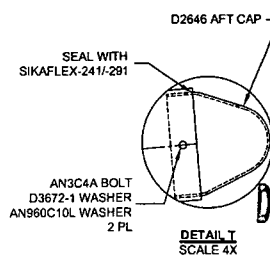


D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

INSTALL D3670-4200 SPACER
SEAL WITH MAGNOBOND 6398
GRIND FLUSH
PRIOR TO PAINTING
4 PL



D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



DETAIL T
SCALE 4X

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08-09-05/14

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CHECKED	JA	DRAWING NO.	REV. H
MFG. APPR.	JE	D3391	SHEET 8 OF 8
APPROVED	JE	TITLE	SCALE
DE APPR.	JE	412 FLOAT SKIDTUBE	NTS
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DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>h</i>	MFG. APPR. <i>AA</i>	APPROVED <i>MP</i>		DE APPR. <i>h</i>		
DATE 09.09.23	DATE 04.09.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02
MP

W/056501

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